



# A STUDY ON TECHNO PEDAGOGICAL SKILLS AMONG TEACHER TRAINEES OF UNIVERSITY OF MYSORE

Sharath Kumar C R<sup>1</sup>, Prof. Praveena K B<sup>2</sup>

<sup>1</sup>Assistant Professor, BGS B.Ed College, Kuvempunagar, Mysore, India.

<sup>2</sup>Registrar of Evaluation, Karnataka State Open University, Mysore, India.

## ABSTRACT

"In this 21<sup>st</sup> Century's technological era it's so hard to move without technology. As a result of advancement in Science and Technology there is a paradigm shift in curriculum transaction processes, and one should adopt to these changes to be lucrative. In many advancements Techno Pedagogy is the hybrid method of teaching in which ICT resources are utilized in the class room transaction process. Techno Pedagogical skills are very useful in making curriculum transactions more effective. It promotes technological literacy and usage of Multimedia packages in the curriculum transaction process. There are various challenges faced by teacher trainees to successfully integrate technology and pedagogy in the curriculum transaction. Lack of knowledge regarding Techno Pedagogical skills on the part of teacher trainees before entering the profession and even Techno pedagogical skills are not properly utilizing by stakeholders at maximum extent. These reasons and the many research results realized to researcher to investigate the high need of studying "Techno Pedagogical skills of Teacher Trainees of University of Mysore." The main aim of this study is to find out the Level of Techno pedagogical skills of teacher trainees with different dimensions of 21st century skills. Here the research is used survey method and used the SCALE FOR TECHNO-PEDAGOGICAL SKILLS tool prepared by and standardized by Jeyaraj I, to collect the data".

**KEY WORDS:** Technological Era, Techno Pedagogical Skills, Technological Literacy.

## INTRODUCTION:

In this 21<sup>st</sup> century technological era it's so hard to move without technology. As a result of advancement in science and technology there is a paradigm shift in curriculum transaction processes, and one should adopt to these changes to be lucrative. In much way advancement Techno pedagogy is the hybrid method of teaching in which ICT resources are utilized in a classroom curriculum transaction process. It is the art of incorporating technology in teaching and learning processes. Techno pedagogical skills are very useful in making teaching learning processes in joyful way.

Technological literacy is regarded as one of the 21<sup>st</sup> century skill. Teachers should possess sound knowledge about the usage of information and communication technology as the learners of current generation have grown with an unprecedented amount of technological exposure. A teacher trainee should be a constant learner to be adept enough to tackle the students with immense technology influence. Teacher should have mastery over the skills to use demands an understanding of how ICT tools are related to the content area and pedagogy part. So along with content and pedagogy knowledge, a 21<sup>st</sup> century teacher trainees must possess ICT knowledge as well.

## SIGNIFICANCE OF THE STUDY:

Due to the rapid revolution in the field of ICT there is a paradigm shift in curriculum transaction processes. Teachers should change their teaching style so as to accommodate technology in to their regular classroom teaching. For a teacher of present generation, it is imperative to have the knowledge about ICT and its usage in the curriculum transaction processes. Teachers should know to successfully integrate right kind of ICT into their subject matter while planning as well as providing the experience. So before entering the profession in the training itself techno pedagogical skills are in cooperated among the teacher trainees. It helps to trainees to make their teaching more effective and joyful by using ICT. So it's necessitating to study the Techno Pedagogical skills among teacher trainees. By this research can find the level of Techno Pedagogical skills among teacher trainees.

## REVIEW OF RELATED LITERATURE:

Dr. Pradeep Kumar S.L (2018) conducted a study on Techno Pedagogical skills of secondary school Hindi teachers working in Kerala. 488 secondary school Hindi teachers were selected for the study. Self-made tool was used for this study. The result revealed both Male and female secondary school Hindi teachers were highly proficient in computer application, Male teachers are much competent in utilizing the web facilities, both Male and female secondary school Hindi teachers were moderate competency in the effective operation of modern technological equipment's.

Jeyaraj I and Ramnath R (2018) examined the technological pedagogical and content knowledge of B.Ed student teachers in Puducherry region. 200 B.Ed student teachers were selected for this study. The standardized scale prepared by Ismail sahin was used as the tool for this study. It consist of 47 items. The result revealed that technological pedagogical and content knowledge of B.Ed student teachers level is moderate.

Dr.C.Thanavathi (2016) conducted a study on Techno Pedagogical skills of Teacher Educator in Tamilnadu state. 50 teacher educators from Thoothukudi district were selected for the study. Self-made tool was used for this study and it consists of 49 items. The finding of the study inferred that 40% of Teacher Educators are Moderate level of Techno Pedagogical skills and there is no significant difference between male and female teacher educators in their Techno pedagogical skills and also there is no significant difference between urban and rural teacher educators in their Techno pedagogical skills.

## Statement of the Problem:

"A Study on Techno Pedagogical skills among Teacher Trainees of University of Mysore"

## OBJECTIVES OF THE STUDY:

To study the level of Techno Pedagogical Skills among Teacher Trainees of University of Mysore.

## METHODOLOGY OF THE STUDY:

Descriptive survey method is used to "Techno Pedagogical skills among Teacher Trainees of University of Mysore"

## Population and Sample of the study:

Stratified random sampling technique is adopted in this study. Teacher Trainees of Ten Colleges of Education affiliated to University of Mysore were selected; from the total population out of two hundred teacher trainees were selected randomly.

## Tool used for the study:

Sl No	Tool	Total Items	Developed By
01	Tool for Techno Pedagogical skills	51	Jeyaraj I

## Description of the tool:

The tool techno pedagogical skill consists of 51 statements in the form of five point Likert type scale i.e., each item has five options such as very little extent, little extent, some extent, great extent and very great extent. The tool or questionnaire provides opportunity to easily collect a great deal of information. Since the questionnaire intended to test the level of TPS among the teacher trainees, classification of positive and negative items were not entertained. All the items were the directional and based on the use of TPS. The content of the questionnaire mainly dealt the following eleven dimensions, namely Word processing skills, Spreadsheet skills, data base skills, electronic presentation skills, web navigation skills, e-mail management skills, WebCT skills, Knowledge of PDA, Educational copy right knowledge, Computer network knowledge and Computer security knowledge.

## The dimension wise distribution of the TPS.

S. No	Dimension	Statement No	Total no. of statement
1.	Word processing skills	1,12,16,32,36,44,48	7
2.	Spreadsheet skills	2,13,18,25,37	5
3.	Data base skills	3,14,26,38	4
4.	Electronic presentation skills	4,15,27,45	4
5.	Web navigation skills	5,17,28,39,46	5
6.	E-mail management skills	6,24,29,40,47	5
7.	WebCT skills	7,19,30,41,50	5
8.	Knowledge of PDA	8,20,31,42	4
9.	Educational copy right knowledge	9,21,33,43	4
10.	Computer network knowledge	10,22,34,49	4
11.	Computer security knowledge	11,23,35,51	4
Total number of statements			51

## Scoring Procedure:

Each test item has five alternatives, namely very little extent (1), little extent (2), some extent (3), great extent (4) and very great extent (5). The teacher trainees were requested to choose right response from the five alternatives by putting a tick mark against the alternatives. The respondents can choose the response based on their ability and capacity. These 51 statements were designed in such a way to know the level of techno pedagogical skills among teacher trainees, especially in the educational context.

## Interpretation of the Data:

The collected data were scored based on the dimension wise.

Sl. No	Scale	No. of statements	Score	Interpretation
1	Techno Pedagogical Skills	51	1- 50	Very low
			51-101	Low
			102- 152	Moderate
			153- 203	High
			204- 255	Very high

## The dimension wise interpretation were given below

Sl. No	Techno pedagogical skills	No. of statements in dimension Wise	Score	Interpretation
1	Word processing skills	7	1-7	Very low
			8-14	Low
			15-21	Moderate
			22-28	High
			29-35	Very high
2	Spreadsheet skills, Web navigation skills, E-mail, management skills, WebCT skills	5	1-5	Very low
			6-10	Low
			11-15	Moderate
			16-20	High
			21-25	Very high
3	Data base skills, Electronic presentation Skills Knowledge of PDA, Educational copy right knowledge, Computer network knowledge, Computer security Knowledge	4	1-4	Very low
			5-8	Low
			9-12	Moderate
			13-16	High
			17-20	Very high

## Statistical techniques used for the study

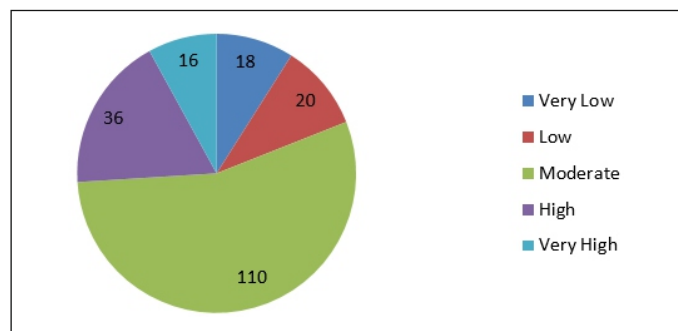
The collected data was analyzed applying the Percentage Analysis.

## Delimitations of the study:

- The study was limited to University of Mysore only.
- The study was limited to B.Ed Teacher trainees only.

## Analysis and Interpretations of data

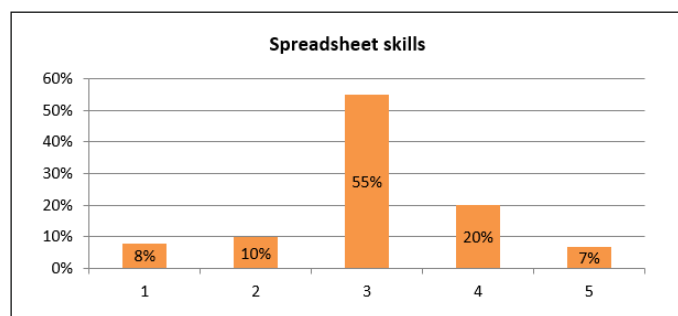
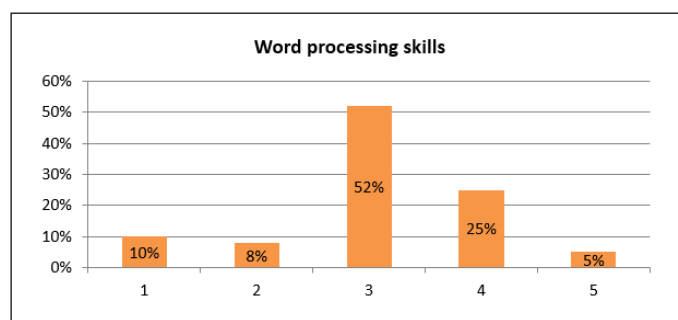
Sl No	Tool	Interpretation	No of Teacher trainees	%
1	Techno Pedagogical Skills	Very Low	18	9%
		Low	20	10%
		Moderate	110	55%
		High	36	18%
		Very High	16	8%



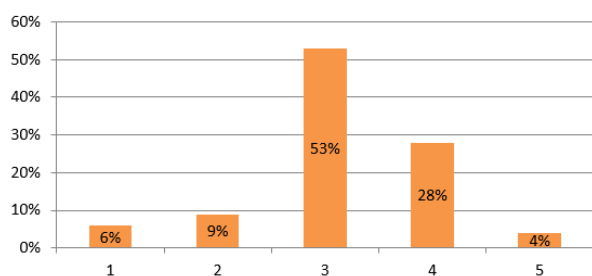
Only 8% Teacher Trainees have very high level of Teach Pedagogical skills, majority of the sample are having moderate Techno pedagogical skills, 9% of Teacher trainees have very low Teach Pedagogical skills.

## Dimension wise Analysis and Interpretations of Techno Pedagogical skill

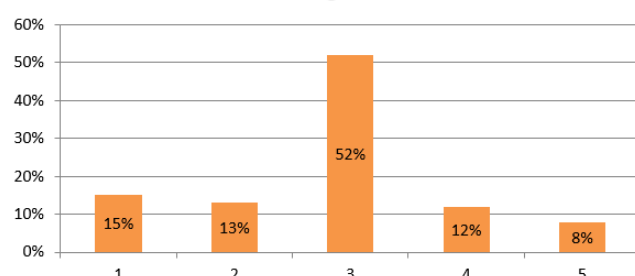
Sl No	Dimension of TPS	Very Low	Low	Moderate	High	Very High
1	Word processing skills	10%	8%	52%	25%	5%
2	Spreadsheet skills	8%	10%	55%	20%	7%
3	Data base skills	6%	9%	53%	28%	4%
4	Electronic presentation skills	7%	6%	60%	17%	10%
5	Web navigation skills	8%	9%	59%	15%	9%
6	E-mail management skills	9%	18%	53%	11%	9%
7	WebCT skills	14%	10%	60%	10%	6%
8	Knowledge of PDA	15%	13%	52%	12%	8%
9	Educational copy right knowledge	5%	6%	60%	19%	10%
10	Computer network knowledge	7%	12%	57%	18%	6%
11	Computer security knowledge	8%	9%	47%	26%	10%



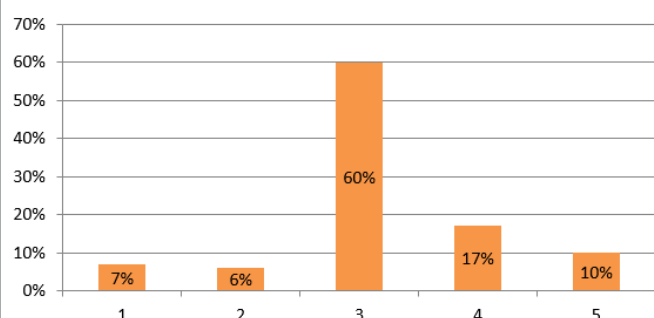
Data base skills



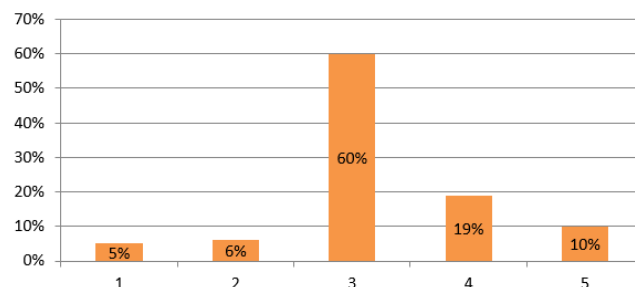
Knowledge of PDA



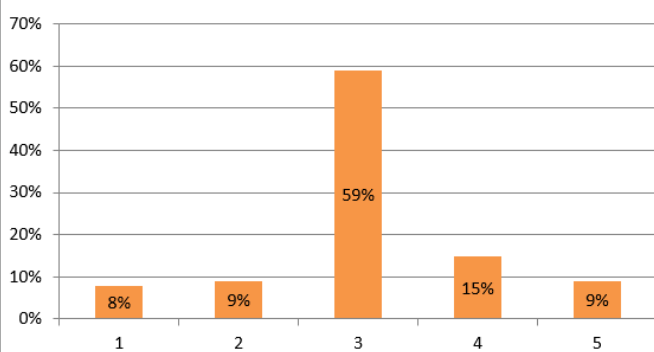
Electronic presentation skills



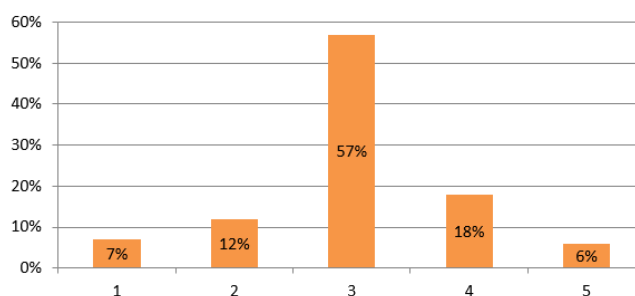
Educational copy right knowledge



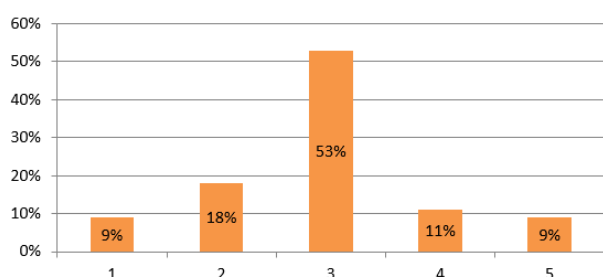
Web navigation skills



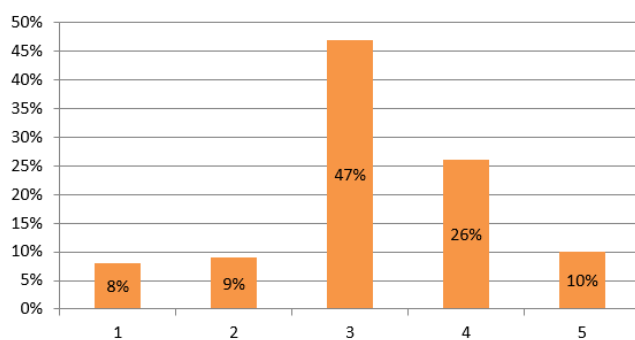
Computer network knowledge



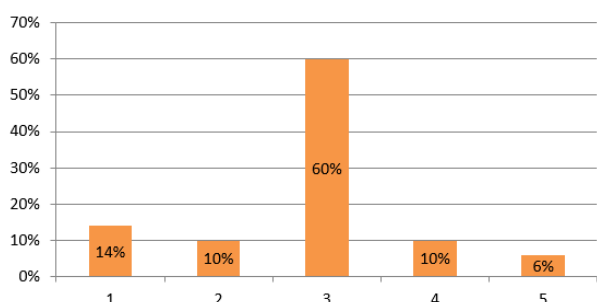
E-mail management skills



Computer security knowledge



WebCT skills



In the different dimensions of the Techno pedagogical skills most of the Teacher trainees have Moderate (55%) techno pedagogical skills. Teacher Trainees having 9% and 10% of very low and low level of techno pedagogical skills respectively. Teacher Trainees having 18% and 8% of high and very high level of techno pedagogical skills respectively.

#### Educational Implications:

- Special trainings related to Techno pedagogical skills can organized for the Teacher Trainees.
- Teacher Trainees can be encouraged to actively participate in different technological orientation programs to develop their Techno pedagogical skills.
- Institution should appoint technological expert to train Teacher Trainee.
- Awareness programs related to Techno pedagogical skills.
- Providing particle knowledge for Teacher trainees.

- ICT curriculum should update.
- Pedagogical practice should be based on ICT.

**CONCLUSION:**

This study reveals that the level Techno pedagogical skills of the Teacher trainees of University of Mysore. By this study research found that teacher trainees having Moderate level of Techno pedagogical skills, but in this 21st century technological era to reach the students effectively usage of technology plays a vital role so every Teacher trainees should have the minimum knowledge about the usage of technology and basic 21st century's technological skills. So by adopting new methods and practices teacher trainees should give more priority towards usage of technology in their teaching practice and they should inculcate the high level Techno Pedagogical skills.

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## APPENDIX- I PERSONAL DATA SHEET

Name (Optional) :

Gender : Male/ Female

Locality : Rural/ Urban

Age : Less than 30 years/ 31 to 45 years / Above 46 years

Type of family : Joint/Nuclear

Marital status : Married/ Unmarried

Major subject : Language /Science/ Humanities

Professional qualification : M. Ed. /M. Phil. / Ph. D.

Teaching experience : Less than 5 years/5-10 years/Above 10 years

Completion of computer course : Yes /No

Usage of technology for educational purpose : Rarely/ Occasionally/frequently

## APPENDIX- II

## SCALE FOR TECHNO PEDAGOGICAL SKILLS INSTRUCTION

statement carefully and make your right response as tick mark ( ) in the concerned option. You are requested to give response to all the statements.

S. No	Statement	Very little extent	Little extent	Some extent	Great extent	Very great extent
1	I am able to convert PDF file to Word file and vice-versa					
2	I know how to use rows and columns to analyze numerical data					
3	I am able to collect information easily through the web.					
4	I am comfortable to make the students/ audience to visualize the presentation.					
5	I am following Boolean search criteria while using the web.					
6	I receive frequent mails from various academic forums/organizations/associations					
7	I used to discuss with fellow members in online forums					
8	I access M.S office through my android phone.					
9	I use anything that I find on internet					
10	I am familiar to connect internet from various networks (Wi-Fi, broadband).					
11	I protect my computer system through antivirus software					
12	I can draw picture in word processing through painting					
13	I am able to draw graphical representation of raw data through spread sheets.					
14	I am capable to organize information.					
15	I can engage students till the end of my presentation.					
16	I am able to insert table and graph while typing text.					
17	I used to avoid prepositions in the web navigation.					
18	I am able to manipulate graph in spreadsheet.					
19	I am using blogs for educational purpose.					
20	I refer e-dictionary through PDA (e.g. android phone).					
21	I am aware of the fair use of copyright.					
22	I am aware of "HUB" and its functions.					
23	I keep away from viruses, spyware and adware through firewalls.					
24	I am able to categorize and prioritize the e-mails					
25	By using spreadsheet program, I can compare sets of data using tables and graphs.					
26	I can retrieve the data when required.					
27	I keep receiving good feedback for my presentations					
28	I am going beyond the first page of the search engine.					
29	I keep clean my trash of my mail.					
30	I clarify my doubt with experts through Skype too.					
31	PDA(Personal Digital Assistant) plays vital in my class room					
32	I am good at finding and replacing the text.					
33	I prefer to get information's through public domains					
34	I could connect large number of computers through networking.					

S. No	Statement	Very little extent	Little extent	Some extent	Great extent	Very great extent
35	I am able to compact applications level threats					
36	I am capable of using hyperlink in word processing.					
37	I am able to arrive statistical findings of data by using the spreadsheet program					
38	I can store information in the electronic gadgets.					
39	I handle many tabs and windows simultaneously for the searching.					
40	I check e-mail everyday					
41	I am using social media as a learning platform.					
42	PDA helps me to be competent in my teaching.					
43	I copy only ten percentages of the content or three minutes of the video whichever is less for my presentations.					
44	I am aware of short cut keys and its functions.					
45	I can do animation for my presentation.					
46	I quit within fifth page of get relevant information.					
47	I used touch every e-mail at once.					
48	I am able to work double windows in one screen.					
49	I am aware of Local Area Network (LAN) and Wide Area Network (WAN)					
50	Apps for education is useful for me					
51	I know how to protect Computer or laptop by using password.					